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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,135	06/27/2003	Reinhard Lihl	LVIP106US	1134

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EXAMINER

BLAKE, CAROLYN T

ART UNIT	PAPER NUMBER
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3724

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	10/604,135	LIHL ET AL.	
	Examiner	Art Unit	
	Carolyn T Blake	3724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 5-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 10 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to applicant's amendment received on March 18, 2005.
2. The objection to the drawings is withdrawn in view of the amendment.
3. The objection to the specification is withdrawn in view of the amendment.
4. The text of those sections in Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

5. Claims 1, 10, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over German Patent DE 32 24 375 to Bilek in view of German Patent DE 36 15 713 to Wolf and US Patent Application 2003/0024368 A1 to Fukuoka. To the degree Applicant's elected embodiment discloses a light source acting as a base-mounted illumination system, a light source acting as an incident illumination system, and a light source acting as an internal preparation illumination system, Bilek discloses a microtome (FIGS 1-3) having a knife (3), a specimen arm (1) movable relative to the knife (3), and at least one light source (6) acting as a base-mounted illumination system, at least one light source (6) acting as an incident illumination system and at least one light source (6) acting as an internal preparation illumination system, wherein the illumination systems illuminate a region around the preparation. The Examiner is interpreting the term "incident" to mean, "falling upon or striking a surface." Bilek fails to disclose the light source is a light-emitting diode. Wolf discloses a microtome (FIGS 1 and 2) having a specimen arm (18) and an illumination system with a light source in which the light source is a light-emitting diode (89). Furthermore, Fukuoka discloses an

illumination system for a cutting device in which incandescent lamps, fluorescent lamps, or light-emitting diodes can be interchanged. Fukuoka states it is preferable to use LEDs because they generate relatively no heat in comparison to the incandescent lamps or fluorescent lamps (paragraph 55). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a light-emitting diode, as disclosed by Wolf, on the Bilek device in order to reduce heat generation, as disclosed by Fukuoka.

6. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bilek in view of Wolf and Fukuoka as applied to claim 1 above, and further in view of Shankle et al (6,195,016 B1).

Regarding claim 2, the Bilek-Wolf-Fukuoka combination discloses the base-mounted illumination system encompasses at least one light-emitting diode, but fails to disclose a frosted glass disk mounted in front of the light-emitting diode. Shankle et al disclose the use of a frosted glass disk in combination with LEDs for the purpose of providing uniform white illumination light (col. 7, lines 1-7). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a frosted glass disk, as disclosed by Shankle et al, on the Bilek in view of Wolf and Fukuoka device for the purpose of providing uniform white illumination light.

Regarding claim 3, Bilek discloses the light source (6) is mounted on the microtome in such a way that a light beam (8) proceeding from the base-mounted illumination system is reflected by a backside (15) of the knife (3) and at the preparation

so as thereby to achieve uniform illumination of the gap between the knife (3) and preparation. See FIG 3.

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bilek in view of Wolf, Fukuoka, and Shankle et al as applied to claims 2 and 3 above, and further in view of Douglas-Hamilton et al (4,896,967). Bilek discloses the light source (6) coincides with an optical axis (5) of an observation microscope (4). However, the Bilek-Wolf-Fukuoka combination fails to disclose the base-mounted illumination system has a first and second light-emitting diode that are inclined with respect to one another at an angle. Douglas-Hamilton et al disclose a base-mounted illumination system (FIG 8) with a first and second light-emitting diode (134) that are inclined with respect to one another at an angle (142). This configuration enhances the uniformity of illumination while preventing direct radiation from entering the observation microscope (col. 7, lines 19-26). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a first and second light-emitting diode that are inclined with respect to one another at an angle, as disclosed by Douglas-Hamilton et al, on the Bilek in view of Wolf, Fukuoka, and Shankle et al device for the purpose of providing uniform illumination while reducing direct radiation.

Response to Arguments

8. Applicant's arguments filed March 18, 2005 have been fully considered but they are not persuasive.

9. In response to Applicant's argument that there is no suggestion to combine the references, the Examiner recognizes that obviousness can only be established by

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combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Bilek teaches a microtome substantially as claimed, but fails to teach the use of LEDs. (Bilek uses a fluorescent lamp.) Wolf teaches the use of LEDs in a microtome illumination system. In addition, Fukuoka teaches the interchangeability of fluorescent lamps and LEDs as illuminating sources, and states LEDs may be preferable to use because they generate less heat. See paragraph 55. Clearly, the Fukuoka reference provides motivation for combining the Bilek and Wolf devices.

10. In response to Applicant's argument that Fukuoka is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Fukuoka teaches the use of LEDs as an illumination source when heat generation is a problem. This is the precise problem with which Applicant is concerned.

11. In response to Applicant's argument Bilek does not disclose an internal preparation illumination system, Bilek discloses an internal preparation illumination system to the same extent as Applicant. Examining FIGS 3 and 4 of Applicant's elected embodiment and FIG 1-3 of Bilek, there appear to be very few differences. Both show a

light-emitting device, a glass component, and a specimen arm. Thus, to the same extent Applicant discloses a base-mounted illumination system, an incident illumination system, and an internal preparation illumination system, Bilek also discloses these three illumination systems.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carolyn T Blake whose telephone number is (571) 272-4503. The examiner can normally be reached on Monday to Friday, 8:00 AM to 5:30 PM, alternating Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Allan N Shoap can be reached on (571) 272-4514. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CB

CB
June 6, 2005



Allan N. Shoap
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Group 3700